

(Sub B1)

1. (Amended) A laser device comprising: an n-doped cladding region and a p-doped cladding region; an optical guiding region disposed between the n-doped cladding region and the p-doped cladding region; and an active region disposed within the optical guiding region;

wherein the laser device further comprises at least one optical confinement region disposed between the active region and at least one of the cladding regions, the at least one optical confinement region having a lower refractive index than the at least one of the cladding regions, and

wherein the laser device emits light in the visible region.

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2. (Amended) A laser device as claimed in claim 1, wherein the at least one optical confinement region is disposed at the interface between the optical guiding region and one of the cladding regions.

3. (Amended) A laser device as claimed in claim 2, wherein the Γ -conduction band of the part of the one cladding region immediately adjacent the at least one optical confinement region is substantially degenerate with the X-conduction band of the at least one optical confinement region.

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6. (Amended) A laser device as claimed in claim 2, wherein the DX level in the part of the at least one cladding region adjacent the at least one optical confinement region is substantially degenerate with the X-conduction band in the optical confinement region.

7. (Amended) A laser device as claimed in claim 1, wherein the energy of the DX level in the one cladding region increases away from the at least one optical confinement region.

8. ~~(Amended)~~ A laser device as claimed in claim 1, wherein the at least one optical confinement region is disposed on the p-side of the laser device and is p-doped.

9. (Amended) A laser device as claimed in claim 1, further comprising a second optical confinement region disposed between the active region and the other of the cladding regions.

10. (Amended) A laser device as claimed in claim 9, wherein the second optical confinement region is disposed at the interface between the optical guiding region and the other of the cladding regions.

12. (Amended) A laser device as claimed in claim 11, where y decreases away from the at least one optical confinement region.

13. (Amended) A laser device as claimed in claim 11, wherein the at least one optical confinement region is an AlGaInP layer having a greater aluminum mole fraction than the respective cladding region.

14. (Amended) A laser device as claimed in claim 11, wherein the at least one optical confinement region is an AlInP layer.

15. (Amended) A laser device as claimed in claim 14, wherein the at least one optical confinement region consists of oxidised AlInP.

16. (Amended) A laser device as claimed in claim 11, wherein y is approximately 0.4 at the interface between the one cladding region and the at least one optical confinement region.

17. (Amended) A laser device as claimed in claim 11, wherein y is approximately 0.9 at the interface between the one cladding region and the optical confinement region.

18. (Amended) A laser device as claimed in claim 1, wherein the thicknesses of the optical guiding region and the or each optical confinement region are selected such that the laser device emits, in use, light having a substantially circular far-field profile.

Please add claims 30 and 31 as follows:

30. (New) A laser device as claimed in claim 1, wherein a refractive index of the at least one optical confinement region is lower than a refractive index of the optical guiding region.

31. (New) A laser device as claimed in claim 1, wherein an aluminum mole fraction of the at least one optical confinement region is higher than aluminum mole fractions of the cladding layer and the optical guide layer.

Reference is made to the attached Appendix which includes the above-identified amendments in annotated form.

REMARKS

Claims 1-31 are pending in the application upon entry of this amendment. Claims 1-3, 6-10 and 12-18 have been amended herein. Claims 30 and 31 have been newly added. Favorable reconsideration of the application, as amended, is respectfully requested.